

REMARKS

Applicants have received the supplemental Final Office Action mailed June 3, 2008. Claim 14 has been amended. Claims 1-10, 12, 14-16, 18-23, 25, 27-30 and 32 are pending, of which claims 1, 14 and 27 are independent. Claims 33-35 are withdrawn. Applicants request reconsideration of the pending claims in view of the following remarks.

Claim Rejections—35 U.S.C. § 103

In the present Office Action, the Examiner continues to reject independent claims 1, 14 and 27 under 35 U.S.C. § 103 as follows:

7. Claims 1-10, 12, 14-23, 25, 27-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorsett Jr. (US Patent 6,658,429) hereinafter Dorsett, and in view of Woolston et al. (US Patent 6,856,967) hereinafter Woolston.

8. As per independent claims 1, 14, 27, Dorsett teaches a method implementing techniques for processing from chemical experimentation for or on a library of materials or a subset of such a library of materials (col. 2, lines 39-45 and col. 5, lines 28-30). Dorsett teaches the claimed, retrieving data from an identified database object, the database object data including attribute data for the database object (Fig. 1, col.5, lines 31-38). Dorsett teaches the claimed, retrieving metadata from the database object, the metadata including a name, a data type, and a value for each attribute of the database object (Fig. 1, col. 9, lines 26-43 and col. 13, lines 14-19). Dorsett teaches the claimed, creating and storing an electronic file for the database object in a generalized data format constructing a generalized data structure for the attribute data using the metadata (Fig. 1, col. 9, lines 20-30). Dorsett teaches the claimed, parsing the attribute data into the generalized data structure (Fig. 1, col. 19, lines 18-21). Dorsett teaches the claimed, exporting the electronic file to one or more external systems for display using an application residing on the one or more external systems (Fig. 1, col. 20, lines 40-43).

Dorsett does not explicitly teach an application dealing with bid price. However, Woolston teaches the claimed, (Fig. 12, col. 16, line 64 to col. 17, line 1). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Woolston's teachings would have allowed Dorsett's method to provide a consistent navigational or taxonomy scheme to navigate and find pricing information in a heterogeneous computing environment and found on the internet (col. 2, lines 40-45). (Office Action mailed June 3, 2008, at pages 4-5).

Applicants' independent claims 1, 14 and 27 recite, respectively, a computer-implemented method; an article comprising a machine-readable medium storing instructions that, when executed, cause one or more machines to perform computer-implemented operations; and a system. Each of the independent claims is directed to generalized data handling that enables data

to be exchanged between different systems. (*See* Applicants' originally filed specification at ¶ 0029). In particular, Applicants' generalized data handling can facilitate exchange by different systems of data having a structure that is not pre-defined. (*See Id.* at ¶ 0033). One particularly useful application is in electronic commerce, where purchasers and suppliers exchange, for example, commercial opportunity and bid information. (*See Id.* at ¶¶ 0030, 031). Applicants' generalized data handling provides many advantages. For example, manual changes to a generalized data handler are not required when the schema of a business object (e.g., a commercial opportunity) is modified (e.g., through the addition of a new data field). (*Id.* at ¶ 039). Industry-specific data handlers may be obviated. (*Id.*). Type checking of data that is exchanged between the different systems may be supported. (*Id.* at ¶ 0040).

Applicants' independent claim 1 is directed to a computer-implemented method that can be employed to exchange data between different systems, where the data has a format that is not pre-defined. Applicants' computer-implemented method recites a specific sequence of actions to facilitate such data exchange—namely, (1) retrieving a database object having attribute data for both a static attribute with a predefined data structure and a dynamic attribute that is dynamically configured; (2) retrieving metadata from the database object; (3) using the metadata retrieved in (2) to (a) construct a generalized data structure for an electronic file, and (b) parsing the attribute data of the database object into the constructed generalized data structure of the electronic file; and (4) exporting the electronic file to an external system for display by an application residing on the external system.

Applicants point out that the actions in the above-described sequence are related, not independent, actions. That is, in (2), metadata is retrieved from the database object that was retrieved in (1); in (3), the metadata retrieved in (2) is used to create an electronic file having a generalized data structure into which data from the database object retrieved in (1) is parsed; in (4), the electronic file that was created in (3) is exported.

To reject Applicants' claim 1, as explained and addressed in detail below, the Examiner again cited isolated portions of US 6,658,429 ("Dorsett") that are not at all related to each other, as required by the actual claim language. This is improper. "[W]hen evaluating the scope of a claim, every limitation in the claim must be considered. USPTO personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation. Instead, the

claim as a whole must be considered.” See *Diamond v. Diehr*, 450 U.S. 175, 188-89 (1981).

As previously noted, and before addressing specific aspects of the Examiner's rejections that fail to address Applicants claims, Applicants again note that Dorsett is directed to completely different endeavor than exchanging data between different systems, where the data has a format that is not pre-defined. Dorsett appears to be addressing “a need for laboratory data management systems” (Dorsett, col. 2, lines 31-32) in view of the fact that “vast quantities of data generated through the application of combinatorial and/or high throughput screening techniques can easily overwhelm conventional data acquisition, processing and management systems.” (Col. 2, lines 10-13). To address this need, Dorsett “provides methods, apparatus, including computer program apparatus, and laboratory data management systems implementing techniques for processing data (including, e.g., receiving, manipulating and/or storing data) from chemical experimentation for or on a library of materials or a subset of such a library of materials.” (Col. 2, lines 39-45).

Turning now to specific rejections, Applicants again traverse the Examiner's improper rejection of claim 1 based on citation of isolated, unrelated portions of Dorsett. Specifically, to reject “retrieving metadata from the database object” (element (2) in Applicants' aforementioned explanation of claim 1), the Examiner pointed to Fig. 1; col. 9, lines 26-43; and col. 13, lines 14-19.

Fig. 1 of Dorsett is merely a system diagram that at most provides context for other description. The figure itself does not illustrate metadata at all, and for that reason alone cannot suggest “retrieving metadata from the database object.”

Col. 9, lines 26-43, provides the following:

Each object has a set of properties that can include, e.g., object metadata, attributes and joins. Object metadata includes information defining the object class, such as an object description, an object type (e.g., Experiment, Element, Other), and a choice of a set of flags, such as Queryable, Updateable, Insertable, Common, and Retrievable in Recordset, that can be assigned to instances of the object class by a user. Object attributes include the set of properties that can be assigned values for any given instance of the object. Each attribute may be described, e.g., by name, description, the type of data the attribute stores (for example integer data, floating point, text strings, image, or x-y data), and other properties such as whether the data is user or system assigned, if it can be updated, if it can be retrieved in a tabular representation of the object type or only through the full object representation, and if the attribute should be presented to the user as having a vocabulary of permitted values, either specific fixed values or those from the current set of instances of the object stored.

The above-quoted passage of Dorsett merely describes properties an object can have, including metadata. This passage does not describe the action of “retrieving metadata from [a] database object,” much less retrieving metadata from a database object that was itself retrieved in a previous action.

Col. 13, lines 14-19 is reproduced below.

The first benefit means that since the Experiment object contains attributes common to all experiments (such as library ID, date and time, notebook number and page, staff member, and keywords), it is possible to simply query the database for all experiments performed on a given library (for example) and immediately produce a list.

Applicants submit that col. 13, lines 14-19, is not applicable to “retrieving metadata from the database object.”

Turning now to the next elements of Applicants' claim 1, “creating and storing an electronic file for the database object in a generalized data format by constructing a generalized data structure for the attribute data using the metadata” and “parsing the attribute data into the generalized data structure” (elements (3)(a) and (3)(b) in Applicants aforementioned explanation of claim 1), Applicants point out the Examiner's failure to provide any explanation as to how the portions of Dorsett cited against these elements relate to previously cited portions of Dorsett, in the manner required by the claim language. Specifically, the Examiner asserted that:

Dorsett teaches the claimed, creating and storing an electronic file for the database object in a generalized data format constructing a generalized data structure for the attribute data using the metadata (Fig. 1, col. 9, lines 20-30). (Office Action mailed June 3, 2008, at page 4).

As indicated above, Fig. 1 is a system diagram that does not even illustrate metadata, and can accordingly, not describe or suggest using such metadata in the manner recited in the claim. The passage identified by “col. 9, lines 20-30” is not a discrete unit of text, and regardless, this text, of which lines 18-33 are reproduced below, does not read on Applicants claim elements.

Database 180 can also store other objects, including, for example, database queries and lists (described in more detail below), as well as a collection of pre-defined objects and object prototypes available for process manager 170 to use to control laboratory apparatus 150, as described in commonly-owned co-pending U.S. patent application Ser. No. 09/550,549, filed Apr. 14, 2000, which is incorporated by reference herein.

Each object has a set of properties that can include, e.g., object metadata, attributes and joins. Object metadata includes information defining the object class, such as an object description, an object type (e.g., Experiment, Element, Other), and a choice of a set of flags, such as Queryable, Updateable, Insertable, Common, and Retrievable in Recordset, that can be assigned to instances of the object class by a user.

Specifically, and contrary to the Examiner's assertion, this passage does not at all describe using previously retrieved metadata to construct a generalized data structure for an electronic file (e.g., *"creating and storing an electronic file for the database object in a generalized data format by constructing a generalized data structure for the attribute data using the metadata"*).

To reject the parsing aspect of this claim element, the Examiner asserted that

Dorsett teaches the claimed, parsing the attribute data into the generalized data structure (Fig. 1, col. 19, lines 18-21). (Office Action mailed June 3, 2008, at page 4).

Besides not illustrating metadata, Fig. 1 also does not illustrate attribute data or a generalized data structure, and for at least this reason, Fig. 1 is not relevant to the above-referenced claim element. As for col. 19, lines 18-21, this passage is reproduced below.

Database server process 130 parses the XML stream and, to save the query in database 180, maps entities extracted from the XML stream to appropriate database tables as described above.

This passage is directed to queries processed by Dorsett's system, and the passage has nothing to do with parsing data from a database object into a generalized data structure that was created using metadata previously retrieved from the database object. This point is clear when col. 19, lines 18-21, are considered in their appropriate full context of lines 12-26:

System 100 can represent queries as objects, XML strings and entries in relational tables in database 180. Queries are formulated as objects in user interface program 160. **In response to a request to save or execute a search, user interface program 160 generates an XML string corresponding to the query object**, which it transmits to database server process 130. **Database server process 130 parses the XML stream** and, to save the query in database 180, maps entities extracted from the XML stream to appropriate database tables as described above. **The user can retrieve a saved query from database 180 by selecting a query from a list 840 of available queries previously stored in database 180**, which may also identify, e.g., queries previously created during a particular session. Queries can also be exported to files for storage. (Emphasis added).

Generated XML strings corresponding to queries which are subsequently parsed in the above

passage have nothing to do with parsing attribute data of a database object into a generalized data structure of an electronic file that was created using metadata retrieved from the database object. Accordingly, Dorsett does not read on this aspect of Applicants' claim 1.

Finally, with reference to Applicants' claim element directed to exporting to an external system the electronic file, where the generalized data structure in the electronic file was created using the metadata and populated in a particular manner, the Examiner asserted:

Dorsett teaches the claimed, exporting the electronic file to one or more external systems for display using an application residing on the one or more external systems (Fig. 1, col. 20, lines 40-43). (Office Action mailed June 3, 2008, at page 4).

Fig. 1 does not even show a separate "external system," and Col. 20, lines 40-43, which are reproduced below, are not at all related to the previous claim elements, as required by Applicants claim 1.

Optionally, database server process 130 can export recordsets for use in commercially available software application programs such as Spotfire, available from Spotfire, Inc. of Cambridge, Mass.

Specifically, Applicants recited exporting the electronic file, which itself was created and populated using the metadata, as described above. The passage cited by the Examiner does not appear to be connected at all to the previously cited passages related to using the metadata, and to the extent the Examiner holds a different view, he has not explained such view on the record.

In the above, Applicants have focused on traversing the rejections of claim 1 based on Dorsett, even though the Examiner based the rejection of claim 1 on the combination of Dorsett and Woolston. Applicants now, again, address Woolston. In the last response, Applicants argued that the Examiner cited Woolston in a completely irrelevant context. Comparison of the rejection to the actual language of claims 1, 14 and 27 makes this clear. The Examiner asserted that

Dorsett does not explicitly teach an application dealing with bid price. However, Woolston teaches the claimed, (Fig. 12, col. 16, line 64 to col. 17, line 1). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Woolston's teachings would have allowed Dorsett's method to provide a consistent navigational or taxonomy scheme to navigate and find pricing information in a heterogeneous computing environment and found on the internet (col. 2, lines 40-45). (Office Action mailed June 3, 2008, at page 5).

However, as previously noted, Applicants' claim 1 does not recite "bid price," nor does Applicants' claim 1 recite "a consistent navigational or taxonomy scheme to navigate and find pricing information in a heterogeneous computing environment." The Examiner did not provide any further clarification in response to Applicants' arguments vis-à-vis Woolston.

To conclude, as Applicants have previously argued, and as further outlined above, Dorsett simply does not teach or suggest Applicants' method, which includes a sequence of specific, interrelated actions. Applicants again request that the § 103 rejections based on Dorsett (or the combination of Dorsett and Woolston) of independent claim 1 be withdrawn, as well as the rejections of dependent claims 2-10 and 12, which depend from claim 1.

The Examiner rejected independent claims 14 and 27 with independent claim 1. Independent claims 14 and 27 recite similar language as independent claim 1. For at least the reasons presented above with respect to claim 1, Applicants submit that claims 14 and 27 are also allowable over Dorsett (or the combination of Dorsett and Woolston). Applicants request that the § 103 rejections of claims 14 and 27 be withdrawn, as well as the rejections of dependent claims 15-16, 18-23 and 25; and 28-30 and 32, which depend, respectively, from claims 14 and 27.

Remarks Regarding the Examiner's Refusal to Address the Substance of Applicants' Previous Arguments; Request for Allowance of Claims or Substantive Examination Based on New Art

During prosecution of this application, Applicants have repeatedly requested that the Examiner fully address Applicants' arguments of record. Applicants have paid for a thorough and substantive examination—both initially and by filing a Request for Continued Examination, yet arguments that were initially raised have still not been addressed. Most recently, after multiple telephone conversations with the Examiner, and multiple telephone messages for the Examiner's supervisor, the Examiner agreed to withdraw the finality of the previous Office Action and provide a new action that fully addressed previously made arguments. Yet the current action largely restates previous positions without addressing the substance of Applicants' arguments. Some arguments have still not been addressed, and the Examiner dismissed other arguments with conclusory statements that provide little guidance for Applicants regarding the

current claims.

As an example of an argument that was not addressed, Applicants argued in the last response, dated December 20, 2008, (and reiterated above) that Woolston was cited against independent claims 1, 14 and 27 in a completely irrelevant context—against language that does not even appear in these claims. (See Response, dated December 20, 2008, at pages 12-13). The Examiner did not provide any further explanation of the relevance of Woolston but rather persisted in combining Woolston with Dorsett and asserting that combination against the same language as before—language that does not appear in the claims against which the combination is cited.

As an example of an argument that was dismissed with only a conclusory statement, Applicants have repeatedly argued that Dorsett does not describe or suggest “creating and storing an electronic file for the database object in a generalized data format by constructing a generalized data structure for the attribute data using the metadata,” or “parsing the attribute data into the generalized data structure.” In the arguments presented, Applicants have addressed in detail how and why the cited portions of Dorsett (Fig. 1, col. 9, lines 20-30, and col. 19, lines 18-21) do not read on this element of the claim. See, for example, page 11 of the Response dated May 14, 2007, and pages 11 and 13-14 of the Response dated December 20, 2007. In response to Applicants repeated, *bona fide* efforts to advance prosecution, the Examiner, in the most recent Office Action addressed this specific point as follows:

e) Applicants' argument filed on 5/14/2007 regarding rejection of claims under 35 U.S.C. 103 stated as "Dorsett does not disclose or suggest, in particular, the need for 'creating and storing an electronic file for the database object in a generalized data format by constructing a generalized data structure from the attribute using the metadata, and parsing the attribute data into the generalized data structure', as recited in claim 1."

In response to Applicants' argument, **Examiner respectfully disagrees. Because, Dorsett do teach a this limitation** [sic] first part "creating ... using the metadata" at (Fig. 1, col. 9, lines 20-30). The second part "parsing the attribute ... data structure" at (Fig.1, col. 19, lines 18-21). (Office Action mailed June 3, 2008, at pages 10-11)(emphasis added).

The response merely cites disagreement with the Applicants' position and re-cites the same portions of Dorsett previously cited, which Applicants addressed in detail. This approach by the Examiner is in direct contravention to the goals and policies of examination of patent claims, as expressed, for example, in MPEP § 707 .07(f):

In order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner must provide clear explanations of all actions taken by the examiner during prosecution of an application.

...
Where the applicant traverses any rejection, **the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it**. MPEP 707.07(f) (Emphasis added).

Not only does the Examiner's approach contravene at least one section of the MPEP, the approach frustrates Applicants' *bona fide* desire to advance prosecution of the underlying patent application, and evidences a disregard for Applicants' significant monetary investment in advancing this application by paying both USPTO fees in maintaining prosecution of the application and legal fees in preparing multiple responses in an attempt to obtain a complete and thorough examination.

In summary, Applicants request that the currently pending claims either be allowed, or thoroughly and substantively examined vis-à-vis new art in a new, non-final office action.

Additional Issues—Claim Objections, § 101 Rejections

In the event that Applicants must next resort to an appeal to the Board of Patent Appeals and Interferences in order to advance prosecution of this case, Applicants address a few remaining points and request that amendment outlined below be entered.

Applicants first address the Examiner's objections to claims 14-23 and 25, which were made as follows:

3. Claim 14-23 and 25 are objected to because of the following informalities: Applicant included in claim 14 phrased as "operable" and it is not a definite recitation and will not have any patentability weight. Therefore, claims 14-23 and 25 fall under non-statutory subject matter. Appropriate correction is required.

Applicants note that the Office's position on exact permissible language for Beauregard claims has changed periodically. Without conceding that the current language is not a definite recitation, Applicants have—solely for purposes of expediting prosecution and without conceding any claim scope—amended independent claim 14 to recite “instructions that, *when executed*, cause one or more machines to perform computer-implemented operations ...” in place

of “instructions *operable* to cause ...” Applicants respectfully submit that this amendment, although not believed to be necessary, addresses the Examiner’s objection. Applicants request that the objection be withdrawn, as well as the objections to claims 15-23 and 25, which depend from claim 14.

Applicants now turn to the § 101 rejection, which is reproduced below.

5. Claims 27-30 and 32 are rejected under 35 U.S.C. § 101, because none of the claims are directed to statutory subject matter. Independent claim 27 merely claiming functional descriptive material, i.e., abstract ideas. Even when a claim that recites a computer that solely calculates a mathematical formula or a computer disk that solely stores a mathematical formula is not directed to the type of statutory subject matter eligible for patent protection. The claims are not producing useful, concrete and tangible results. See *Diehr*, 450 U.S. at 186 and *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972). (Office Action mailed June 3, 2008, at page 3).

Applicants have discussed and argued this point on paper and by telephone, and Applicants understood the issue to have been resolved. Specifically, independent claims 1, 14 and 27 are each directed to, *inter alia*, “exporting the electronic file to one or more external systems for display using an application residing on the one or more external systems.” This action is clearly a concrete and tangible result, and as outlined previously, it is clearly useful—namely to facilitate exchange by two different systems of data having a structure that is not pre-defined. The Examiner accepted as persuasive this position with respect to claims 1 and 14, and accordingly withdrew the § 101 rejection. Applicants respectfully submit that the same rationale applies to claim 27, and Applicants do not understand the Examiner’s inconsistent treatment of claim 27.

Accordingly, Applicants request that the § 101 rejection of claim 27 be withdrawn, as well as the corresponding rejections of claims 28-30 and 32, which depend from claim 27. Alternatively, Applicants request additional explanation and a suggestion of how Applicants should consider amending claim 27.

Conclusion

Applicants respectfully submit that pending claims 1-10, 12, 14-16, 18-23, 25, 27-30 and 32 are in condition for allowance and request that the Examiner allow them. To the extent that

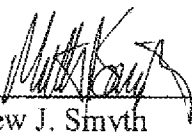
the Examiner holds a different view, the Examiner is requested to reopen prosecution and analyze the pending claims relative to new art in a new, non-final office action.

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to this amendment.

No fees are believed to be due with this submission. If this is in error, please apply any charges, or credits, to deposit account 06-1050.

Respectfully submitted,

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